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T-D

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/424,035	11/17/99	ECKEL	MD-03837-EEA-3

IM22/0614

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EXAMINER  
HOKE, V

ART UNIT 1714	PAPER NUMBER 9
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DATE MAILED: 06/14/01 9

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

<b>Office Action Summary</b>	Application No. 09/424,035	Applicant(s) ECKEL ET AL	Examiner VERONICA P. HOKE	Art Unit 1714	
	<i>– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –</i>				
<b>Period for Reply</b>					
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.					
<ul style="list-style-type: none"> <li>- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.</li> <li>- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.</li> <li>- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.</li> <li>- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).</li> <li>- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).</li> </ul>					
<b>Status</b>					
1) <input checked="" type="checkbox"/> Responsive to communication(s) filed on <u>May 4, 2001</u>					
2a) <input checked="" type="checkbox"/> This action is <b>FINAL</b> .      2b) <input type="checkbox"/> This action is non-final.					
3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> 1035 C.D. 11; 453 O.G. 213.					
<b>Disposition of Claims</b>					
4) <input checked="" type="checkbox"/> Claim(s) <u>1-10</u> is/are pending in the application.					
4a) Of the above, claim(s) _____ is/are withdrawn from consideration.					
5) <input type="checkbox"/> Claim(s) _____ is/are allowed.					
6) <input checked="" type="checkbox"/> Claim(s) <u>1-10</u> is/are rejected.					
7) <input type="checkbox"/> Claim(s) _____ is/are objected to.					
8) <input type="checkbox"/> Claims _____ are subject to restriction and/or election requirement.					
<b>Application Papers</b>					
9) <input type="checkbox"/> The specification is objected to by the Examiner.					
10) <input type="checkbox"/> The drawing(s) filed on _____ is/are objected to by the Examiner.					
11) <input type="checkbox"/> The proposed drawing correction filed on _____ is: a) <input type="checkbox"/> approved b) <input type="checkbox"/> disapproved.					
12) <input type="checkbox"/> The oath or declaration is objected to by the Examiner.					
<b>Priority under 35 U.S.C. § 119</b>					
13) <input type="checkbox"/> Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).					
a) <input type="checkbox"/> All b) <input type="checkbox"/> Some* c) <input type="checkbox"/> None of:					
1. <input type="checkbox"/> Certified copies of the priority documents have been received.					
2. <input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____.					
3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).					
*See the attached detailed Office action for a list of the certified copies not received.					
14) <input type="checkbox"/> Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).					
<b>Attachment(s)</b>					
15) <input type="checkbox"/> Notice of References Cited (PTO-892)					
16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)					
17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____					
18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____					
19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)					
20) <input type="checkbox"/> Other: _____					

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Claims 1-10 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Lee ( US Patent No. 5674924) , Kakegawa et al or EPO 731140 ( Lee et al), taken with 1) Fuhr et al ( 065), Witman et al or Podszun et al and 2) Serini et al , for the reasons stated in the office action mailed December 27, 2000.

Applicants conceded in the specification at page 10:

*“Since it is known that , during the grafting reaction , the graft monomers are not necessarily completely grafted on to the graft base, graft polymers B according to the invention also include those products that are obtained by polymerization of the graft monomers in the presence of the graft base.”*

Applicant therefore admit that it is art recognized that some free SAN may ordinarily form along with the sought grafted resin and has evidently not necessarily been removed prior to the grafted resin's use. It is therefore specious to contend that a residual quantity of SAN , which presumably may be **less than** the 3 or 5 wt. % contained in the comparative compositions 2 and 3 ( specificaiton on page 21, Table 1) does not ordinarily accrue in ABS resin impact modifiers used in ABS/PC formulations that typify all of the applied prior art phosphate -flame retardant formulations.. Therefore unexpected properties cannot be attributed to its absence since the presence of SAN is not ordinarily purposefully sought in the first place.

The criticism of applying Lee's (924) disclosure of utilizing a mono / oligomeric phosphate blend and Teflon to promote PC/ABS blend's flameproofing due to Lee's having chosen a particular core shell ABS to obviate compatibility problems which engender physical debilitations

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such as juicing, reduced impact strength and lack of homogeneity, because applicant is "not thus structurally restricted" (response at page 4, penultimate paragraph) in the type ABS resin utilized, is untenable. What Lee relates, by comparative exs. 3-6 in Table 1 and Table 2 in col.7, is that the presence of SAN in an amount of 4 % (comparable to applicants comparative examples) when utilized with the same "hemisphere" type ABS resin characteristic of applicants ABS resin component, significantly reduces impact strength and/or incurs greater susceptibility to juicing as compared to the core shell type ABS (exs. 1 and 2) or an ABS resin devoid of SAN (comparative exs. 1 and 2). These differences are a strong motivation to utilize the applied references' multi-phosphate flame retardant PC/ABS/Teflon resin blends which are devoid of SAN.

The criticism of the application of Serini in its utilization of nuclearly alkylated Bisphenol A produced PC as the PC component of a PC/ABS blend which also is amenable to flame retardants' inclusion (col.8, line 13), as being misapplied since welding strength there is attributed to this nuclearly- alkylated state, is equally untenable. The pertinency relied upon in Serini is the recognition that welding strength improvement is benefited not only by such substitution but also by both the increased quantity of and particle size of the rubber component in the grafted ABS resin (col.5, line 55- col.6, line 13). Those particle sizes correspond to those which characterize the rubber component in applicants ABS resin, whch may be a core shell polymer.

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It is evident that increasing the SAN content would reduce the per cent diene rubber content in the total composition by diluting the quantity of diene rubber concentration in the total matrix which in turn would reduce the weld line strength. This is further evidence that the prior art is cognizant of several parameters to achieve high weld strength. This entails:

- 1) Avoiding the presence of non grafted, i.e. free, SAN copolymer and preferably utilizing a core-shell type ABS resin as related by Lee ( US patent).
- 2) Utilizing an ABS resin having sufficient amount of diene rubber content which particles are also of such size as to promote weld strengthening and preferably utilizing a nucerly alkylated Bisphenol A- derived PC as shown by Serini in ex. a vs. ex. e and ex.b vs. ex. f in the Table bridging cols. 19 and 20.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

vph

June 13, 2001

703 308-2444

*Veronica P. Hoke*  
VERONICA P. HOKE  
PRIMARY EXAMINER